

### REMARKS

By this Amendment, Claims 1, 3, 4, 5, 11, 14, 15, 18, 19, 20, 21, 22 and 23 have been amended, new Claims 24-26 have been added, and Claims 6-8 have been cancelled, while the Specification has been amended to correct informalities, to place the application in immediate condition for allowance.

The Specification has been amended as shown to merely correct typographical errors and provide revisions for matters of form. No new matter is added by the amendments to the Specification.

In the outstanding Office Action, the Examiner has rejected Claims 1-23 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 6,968,591 to Tanaka in view of U.S. Patent No. 6,506,472 to Tanaka et al. In making this ground of rejection, the Examiner has conceded that Tanaka '591 fails to teach the joining part "formed intermittently on a parallel line between the central joining part and the two edges being intermittent spot-form joining portions formed such that they don't overlap in the direction of flow of the fiber bundles, the thickness of the fibers being 1 to 18 denier, and the holding sheet comprising a single non-woven sheet folded in two and heat sealed to a side of a base sheet opposite the fiber bundles." Regarding this deficiency in Tanaka '591, the Examiner has alleged that Tanaka et al. '472 teach the "joining part formed intermittingly [sic] on a parallel line between the central

joining part and the two edges being intermittent spot-form joining portions formed such that they don't overlap in the direction of flow of the fiber bundles ...". The Examiner has made reference to column 6, line 64 - column 7, line 7 in support of this alleged disclosure of Tanaka et al. However, looking at that section of the Tanaka et al. patent, one finds Claims 7, 8 and 9 which do not teach that which the Examiner alleges in the Office Action. Applicant must accordingly respectfully disagree with the ground of rejection.

The Patent and Trademark Office has the initial burden of producing a factual basis for a rejection under 35 U.S.C. § 103. In other words, the Patent and Trademark Office must establish a prima-facie case for obviousness. If examination does not produce a prima-facie case of unpatentability under § 103, then without more, the applicant is entitled to a grant of the patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ 2d 1443, 1444 (Fed. Cir. 1992). The issue of the prima-facie case for obviousness was visited by the Federal Circuit in *In re Thrift*, 63 USPQ 2002. In that case, the Federal Circuit stated the following:

"To establish a prima-facie case of obviousness the Board must, *inter alia*, show 'some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.' *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988). 'The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved.' *In re Kotzab*,

217 F.3d 1365, 1370, 15 USPQ 2d 1313, 1317 (Fed. Cir. 2000)."

63 USPQ 2d at 2006. Put another way, the Federal Circuit ruled that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ 2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970). If the Primary Examiner has established a case for *prima-facie* obviousness, the burden then shifts to the applicant to demonstrate why the claims are unobvious. See *Patents and the Federal Circuit, 5<sup>th</sup> Edition*, by Robert L. Harmon, § 4.7(b), page 185.

In *Graham v. John Deere Co.*, 383 US 1, 148 USPQ 459 (1966), the U.S. Supreme Court announced the test that has since become the standard guideline for assessing patentability under 35 U.S.C. § 103. Under that section of the Patent Statutes, the Supreme Court stated that the inquiry was as follows:

"The scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined."

383 US at 17.

The Federal Circuit has also set forth several tenets of patent law concerning obviousness considerations:

"Our comments on the ... obviousness determination generally include the following tenets of patent law that must be adhered to when applying §103:

(1) the claimed invention must be considered as a whole (35 U.S.C. 103: see, e.g., *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 USPQ 1021, 1024 (Fed. Cir. 1984) (though the difference between claimed invention and prior art may seem slight, it may also have been the key to advancement of the art); (2) the references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination (see, e.g., *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984); (3) the references must be viewed without the benefit of hindsight vision afforded by the claimed invention (e.g., *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983); ... " *Hodosh v. Block Drug Co., Inc.*, 229 USPQ 182 (CAFC 1986). Footnote 5 on page 187.

The inquiry as to when the issue of obviousness is to be resolved is that the inquiry is conducted "at the time the invention was made." 35 U.S.C. § 103. In attempting to reject claims under 35 U.S.C. § 103, there must be a reason or suggestion in the art for making the combination of features suggested by the Examiner other than knowledge learned from applicant's own disclosure. *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ 2d 1529, 1532 (Fed. Cir. 1988). The test to be applied is whether the references taken as a whole would suggest the invention to one of ordinary skill in the art. *Medtronic Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1582, 220 USPQ 97, 110 (Fed. Cir. 1983). Inherent in the forbiddance of the use of hindsight is the forbiddance of picking and choosing various features of different prior art references as a mosaic to recreate a facsimile of the claimed invention without a suggestion to combine them together in the references taken as a whole. *Akzo N.V. v. United States ITC*, 808 F.2d 1471, 1481, 1 USPQ 2d 1241, 1246 (Fed. Cir. 1986). Where the Examiner has picked and chosen various features from separate prior art references and has combined them together using applicant's own disclosure as the blueprint to do so, such a rejection is fatally flawed and must be reversed. *Heidelberger Druckmaschinenag v. Hantscho Commercial Products, Inc.*, 21 F.3d 1068, 1072, 30 USPQ 2d 1377, 1379-80 (Fed. Cir. 1994); *In re Geiger*, 815 F.2d 686,

688, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). It is improper to use the inventor's patent application as an instruction book on how to reconstruct the prior art. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1574, 1 USPQ 2d 1593, 1602 fn29 (Fed. Cir. 1987).

It is respectfully submitted that the combination of Tanaka and Tanaka et al. cannot be combined together under 35 U.S.C. 103(a) to make a prima-facie case for the obviousness of the claims as presented. In particular, it is submitted that neither of the prior art references taken alone or in combination with one another teaches the concept that the base sheet and the fiber bundle are joined at a spot-form joining part formed intermittently along a direction crossing the flow direction of the fibers between the central joining part and the two end edges parallel therewith. This structure is specifically seen with reference to a comparison of Figures 1 and 2. In those Figures, note the two end edges 2a and 2b, the centrally located joining part 4, the locations of spot-forming 5a, 6a, 5b and 6b, and the direction of extension of the fibers 31a and 31b (Figure 1), noting that the lines of intermittent joining 5a, 5b, 6a and 6b cross the flow direction of the fibers 31a and 31b, respectively. This concept is nowhere taught or suggested by the prior art applied against the claims as previously presented.

It is further noted that it would not be obvious to modify those references to arrive at that structure. Such a reading of

the prior art references would amount to the hindsight reconstruction of the prior art in light of Applicant's own disclosure. There would be no reason or suggestion in the prior art for combining the references in that manner. *In re Dow Chemical Co.* Such a ground of rejection would only be contemplated by using Applicant's own disclosure as a blueprint to do so, a technique forbidden in patent law. *Heidelberger Druckmaschinenag.* Finally, such a ground of rejection would constitute using Applicant's own patent application as an instruction book on how to reconstruct the prior art.

It is noted that the feature described above is now found in each of independent Claims 1, 14 and 20. As such, each of these independent claims and all of the claims dependent therefrom are equally patentable.

New Claims 24 and 25 are dependent on Claim 2 and, as such, are patentable for the same reasons set forth above vis.a.vis Claims 1 and 2. New independent Claim 26 includes the same feature that provides the patentable distinction of Claims 1-25. Accordingly, for the same reasons, independent Claim 26 is patentable.

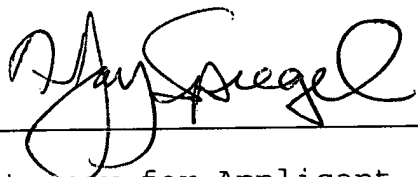
Accordingly, it is respectfully submitted that Claims 1-26 are now patentable over the prior art of record. As such, reconsideration and allowance of this application are respectfully solicited.

If, for any reason, the Examiner believes that an interview with Applicant's Attorney would be helpful in expediting the prosecution of this patent application, the Examiner is respectfully requested to telephone Applicant's Attorney locally at (703) 619-0101 so that a discussion of any outstanding issues may be had.

Again, reconsideration and allowance of this application are respectfully solicited.

Respectfully submitted,

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A handwritten signature in cursive script, reading "H. Jay Spiegel", written over a horizontal line.

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875						Application or Docket Number <b>HOS-73</b>				
<b>APPLICATION AS FILED – PART I</b>										
(Column 1)		(Column 2)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A			N/A			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A		N/A			N/A			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A			N/A			
TOTAL CLAIMS (37 CFR 1.16(j))	23	minus 20 =	* 3	X =		OR	X =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 =	* 0	X =			X =			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.										
<b>APPLICATION AS AMENDED – PART II</b>										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
<b>AMENDMENT A</b>	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(j))	* 23	Minus	** 23	=	X =		OR	X =	
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 3	= 1	X =		OR	X 210 =	210
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	210
<b>AMENDMENT B</b>	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(j))	*	Minus	**	=	X =		OR	X =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X =		OR	X =	
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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24, 25, 29, 35 AND 39 WITH CHANGES SHOWN WITH UNDERLINING  
AND STRIKETHROUGHS

part 4, the fibers of the fiber bundles 3 are in a condition in which they are completely unjoined with the base sheet 2, since no spot-form joining parts 7 are present from the central joining part 4 up to the end 31a in the direction of flow of the fibers. Also, the fiber bundles 3 between the other end edge 2b of the base sheet 2 and the central joining part 4 of the fiber bundles 3 are joined by the spot-form joining parts 7. The ends 31a, 31b in the direction of flow of the fibers of the fiber bundles 3 are liberated without being joined with the base sheet 2. The fibers of the fiber bundles 3 are constituted so as to be able to move freely in a length from the central joining part 4 or spot-form joining part 7 up to the tips 31a, 31b.

In this way, in the sheet 1 for a cleaning tool, between the central joining part 4 and the ends 2a, 2b, the fiber bundles 3 are joined by means of the spot-form joining parts 7 constituting intermittent joining parts, so, when seen from the direction of flow of the central joining part 4, the length of free movement of the fibers from the end of the fiber bundle 3 up to the joining part is different in the portions where a joining part with the spot-form joining part 7 is provided and in the portions where such a joining part is absent; in this way, entanglement of the fibers of the fiber bundles 3 can be prevented.

As shown in Figure 2, the spot-form joining parts 7 are provided directly above lines (parallel lines) 5a, 5b, 6a,

restriction if nonwoven fabric sheet is employed, preferably the short fibers (fiber bodies) constituting the sheet are short fibers having thermal fusibility with the fiber bundles 3. Examples that may be given of such short fibers having thermal fusibility include fibers such as polypropylene, polyethylene or polyethylene terephthalate and composite fibers of these of the sheath/core type or side-by-side type.

Examples that may be given of the nonwoven fabric sheet employed as the base sheet 2 include ~~spanless~~ spun lace nonwoven fabric, ~~span~~ spun-bonded nonwoven fabric, thermally bonded nonwoven fabric, air-through bonded nonwoven fabrics, or point-bonded nonwoven fabrics and the like. ~~Span-bonded~~ Spun-lace nonwoven fabrics, thermally bonded nonwoven fabrics and the like are especially desirable in this case. The nonwoven fabric sheet that is used may be constructed from a single sheet, or may be constructed by laminating a plurality of sheets of the same or different types.

The fiber bundles 3 that are used in the sheet 1 for a cleaning tool are aggregates of fibers that are overlapped side by side so that numerous fibers are oriented in the same direction, with the respective fibers being wrapped to an extent that prevents the fibers from coming undone. The fiber bundles 3 are formed into sheets and are handled as sheet-form fiber bundles. Also, the fiber bundles 3 may be partially mutually coupled by thermal fusion or the like.

The fiber bundles 3 may be constituted of fibers of the same type or may be constituted of fibers of a plurality of different types.

The fiber bundles 3 may be constituted solely of fibers of the same thickness or may be constituted of fibers of a plurality of thicknesses. Irrespective of whether the fiber bundles 3 are the same or different in respect of the types of constituent fibers and their thickness, they may be constituted of fibers of different colors.

For example, natural fibers such as cotton, wool or the like, synthetic fibers such as polyethylene, polypropylene, polyethylene terephthalate, nylon, polyacrylics or the like, composite fibers such as core-sheath type fibers, ocean-island type fibers, i.e. islands-in-the-sea type fibers, side-by-side type fibers or the like are used as the fiber bundles 3. Thermally fusible synthetic fibers or composite fibers are preferable, in particular core-sheath type composite fibers whose core is made of polypropylene and whose sheath is made of polyethylene are desirable since they combine the excellent thermal fusibility of the polyethylene constituting the sheath with the "body" of the polypropylene constituting the core.

Also, the fibers that are employed for the fiber bundles 3 may be crimped, being for example mechanically crimped or thermally crimped.

Furthermore, the fiber bundles 3 may also be long fiber bundles generally called "tow" that are manufactured from

and/or back surface of the base sheet 2, the outer surface of this tacky adhesive layer being covered with a peel-off sheet. If a sheet 1 for a cleaning tool is formed in this way, when attaching to the cleaning tool 10 for floor wiping, the tacky adhesive layer can be joined at the position of a stop 13 on the upper surface of the pedestal 12 after removing the peel-off sheet. It should be noted that, if a tacky adhesive layer is provided on the attaching parts 8 of the cleaning tool 10 for floor wiping, attaching could be effected onto the pedestal 12 of a cleaning tool 10 for floor wiping that is not provided with a fixed member such as the stop 13. Also, although not particularly shown in the drawing, it would be possible to provide slits in the sheet 1 for a cleaning tool for attaching onto for example the pedestal of the cleaning tool in the attaching parts 8, 8, 8 in the vicinity of the two end edges 2a, 2b in the direction of flow of the fibers of the fiber bundles 3.

The base sheet 2 and/or fiber bundles 3 of the sheet 1 for a cleaning tool according to the present invention could be coated with an agent for enhancing the dirt capturing ability. Examples of such an agent that may be mentioned include an oiling agent or the like containing a mineral oil such as liquid paraffin or the like, a silicone oil or a nonionic surfactant.

Figure 5 is a perspective view showing the external appearance of an example of a cleaning tool for floor wiping.

laminating fiber bundles 3a of slender fibers onto the base sheet 2 and joining by thermal fusion with the central joining part 4 and spot-form joining parts 7, then joining the fiber bundles 3b of thick fibers with the ~~intermediate~~ layer central joining part 4.

It should be noted that, in the cleaning sheet 1 of the hand-held cleaning tool sheet 20, the positions where the joining parts of the spot-form joining parts 7 that are intermittently formed on parallel lines between the two end edges 2a, 2b parallel with the central joining part 4 are provided is further inwards than the position where the cuts 25 are provided i.e. they are formed so as not to overlap the cuts 25.

In the cleaning tool sheet 1 of the hand-held cleaning tool sheet 20 shown in Figure 8, in the same way as in the case of the sheet shown in Figure 1, the spot-form joining parts 7 are formed using two parallel lines respectively provided as parallel lines between the two end edges 2a, 2b that are parallel with the central joining part 4. It would also be possible to form the spot-form joining parts 7 using four parallel lines respectively provided as parallel lines between the two end edges 2a, 2b that are parallel with the central joining part 4.

For the base sheet 2 and fiber bundles 3 (3a, 3b) of the hand-held cleaning tool sheet 20, the material indicated by the cleaning tool sheet 1 shown in Figure 1 can be employed.

31 serve for attaching the hand-held cleaning tool sheet 20 and are formed as bifurcated branch members as shown in Figure 12.

5 In order to attach the hand-held cleaning tool sheet 20 on the holding member 30, the legs 31 of the holding member 30 are inserted from the insertion opening 23 of the holding sheet 21 of the hand-held cleaning tool sheet 20 and held in the holding part 22. When the hand-held cleaning tool sheet 20 becomes contaminated, the legs 31 of the holding member 10 30 are extracted from the insertion opening 23 and replaced by another, uncontaminated hand-held cleaning tool sheet 20; in this way an excellent wiping effect is obtained.

The legs 31 for the holding member 30 of the hand-held wiping cleaning tool shown in Figure 12 are formed in a 15 shape obtained by cutting a cylinder in half. These legs 31 are provided with protrusions 33 that protrude outwards from their periphery at four locations having a prescribed interval in the length direction of the upper periphery of their respective branch members.

20 These protrusions 33 are formed as projections protruding such that the radius of the legs 31 becomes larger rearwardly than forwardly; thus they make it possible for the legs 31 to be inserted comparatively smoothly in the case of insertion from the tips of the legs 31 into the 25 holding part 22 of the hand-held cleaning tool sheet 20 but can prevent the hand-held cleaning tool sheet  $\pm$  20 from



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